

Listing of Claims

1. (CURRENTLY AMENDED) A method of retransmitting a GPS signal inside a structure, the method comprising:

receiving the GPS signal with a link antenna positioned to receive signals from outside of the structure;
with a primary repeater coupled to the link antenna, down converting the GPS signal to an intermediate frequency (IF) signal, amplifying and filtering the IF signal, and up converting the IF signal to produce a radio frequency (RF) signal;
with a broadcast antenna coupled to the primary repeater, wirelessly transceiving the RF signal with a secondary repeater configured for transceiving signals inside the structure; [and]
at the secondary repeater, transceiving the RF signal with a link antenna;
downconverting the RF signal to a second intermediate frequency (IF) signal;
amplifying and filtering the second IF signal;
upconverting the second IF signal to a second GPS signal; and
with a broadcast antenna of the secondary repeater, [retransmitting] transceiving the [RF] second GPS signal with GPS equipment inside the structure.
2. (CANCELLED)
3. (CURRENTLY AMENDED) The method of claim 1, wherein the RF signal is a [second] GPS signal.

4. (PREVIOUSLY PRESENTED) The method of claim 1, wherein the RF signal is an unlicensed frequency signal.

5. (CANCELED)

6. (ORIGINAL) The method of claim 1, further including filtering the GPS signal.

7. - 11. (CANCELED)

12. (CURRENTLY AMENDED) The method of claim 11, wherein the primary repeater is coupled to [an internal] the broadcast antenna by a transmission line.

13. (CANCELED)

14. (CURRENTLY AMENDED) A method of retransmitting a GPS signal inside a structure, the method comprising:

receiving the GPS signal;

with a primary repeater, down converting the GPS signal to an intermediate frequency (IF) signal;

amplifying the IF signal;

up converting the IF signal to an unlicensed frequency signal;

wirelessly retransmitting the unlicensed frequency signal to a [link antenna]
secondary repeater inside the structure;

receiving the unlicensed frequency signal;

with the secondary repeater down converting the unlicensed frequency signal to a second IF signal;

amplifying the second IF signal;

up converting the second IF signal to a second GPS signal; and

retransmitting the second GPS signal inside the structure with an antenna coupled to the secondary repeater.

15. (ORIGINAL) The method of claim 14, wherein the retransmitting the unlicensed frequency signal is between a primary repeater and the link antenna of a secondary repeater.

16. (CURRENTLY AMENDED) A GPS repeater system for retransmitting a GPS signal inside a structure, the repeater system comprising:

a link antenna, positioned generally to receive signals from outside of the structure, for receiving the GPS signal;

a primary repeater coupled to the link antenna and including a circuit for down converting the GPS signal to an intermediate frequency (IF) signal, amplifying and filtering the IF signal, and up converting the IF signal to produce a radio frequency (RF) signal;

a broadcast antenna coupled to the primary repeater and operable for wirelessly transceiving the RF signal throughout the structure and with a secondary repeater;

a secondary repeater configured for transceiving signals inside the structure and including a link antenna for transceiving the RF signal with the primary repeater,

the secondary repeater including a circuit for downconverting the RF signal to a second intermediate frequency (IF) signal, amplifying and filtering the second IF signal and upconverting the second IF signal to a second GPS signal; and

a broadcast antenna, coupled to the secondary repeater, and operable for [retransmitting the RF] transceiving the second GPS signal with GPS equipment inside the structure.

17. (CANCELLED)

18. (CURRENTLY AMENDED) The repeater of claim 16, wherein the RF signal is a [second] GPS signal.

19. (PREVIOUSLY PRESENTED) The repeater of claim 16, wherein the RF signal is an unlicensed frequency signal.

20. (CANCELED)

21. (CURRENTLY AMENDED) The repeater of claim 16, wherein the primary repeater circuit includes a down converter for down converting the GPS signal to an intermediate frequency (IF) signal, a first amplifier for amplifying the IF signal, a filter for filtering the IF signal, a second amplifier for amplifying the IF signal and an up converter for up converting the IF signal to produce the RF signal.

22. (ORIGINAL) The repeater of claim 16, wherein the amplifier includes a filter for

filtering the GPS signal.

23 - 30. (CANCELED)

31. (CURRENTLY AMENDED) A GPS repeater system for retransmitting a GPS signal inside a structure, the repeater system comprising:

a primary repeater having a link antenna for receiving the GPS signal, a down converter for down converting the GPS signal to an intermediate frequency (IF) signal, an amplifier for amplifying the IF signal, an up converter for up converting the IF signal to an unlicensed frequency signal, and a broadcast antenna for wirelessly retransmitting the unlicensed frequency signal, inside the structure, to a secondary repeater;

the secondary repeater having a second link antenna for receiving the unlicensed frequency signal, a second down converter for down converting the unlicensed frequency signal to a second IF signal, a second amplifier for amplifying the second IF signal, a second up converter for up converting the second IF signal to a second GPS signal, and a second broadcast antenna for wirelessly retransmitting the second GPS signal to GPS equipment inside the structure.

32. (ORIGINAL) The system of claim 31, wherein the unlicensed frequency signal is about 2.4 GHz.

33. (ORIGINAL) The system of claim 31, wherein the unlicensed frequency signal is about 902-928 MHz.

34. (ORIGINAL) The system of claim 31, wherein the GPS signal is about 1.5 GHz.

35. (ORIGINAL) The system of claim 31, wherein the IF signal is about 140-160 MHz.

36. (CURRENTLY AMENDED) A method of retransmitting a satellite signal inside a structure, the method comprising:

receiving the satellite signal;

at a primary repeater, down converting the satellite signal to an intermediate frequency (IF) signal, amplifying and filtering the IF signal, and up converting the IF signal to produce an unlicensed frequency signal;

wirelessly retransmitting the unlicensed frequency signal inside the structure;

receiving the unlicensed frequency signal in the structure at a secondary repeater;

at the secondary repeater, down converting the unlicensed frequency signal to a second IF signal;

amplifying the second IF signal;

up converting the second IF signal to produce a second satellite signal; and

wirelessly retransmitting the second satellite signal inside the structure.

37-40. (CANCELLED)

41. (ORIGINAL) The method of claim 36, wherein the satellite signal is a digital radio signal.

42. (CURRENTLY AMENDED) A repeater system for retransmitting a satellite signal inside a structure, the repeater system comprising:

a primary repeater including:

a link antenna for receiving the satellite signal;

a circuit for down converting the satellite signal to an intermediate frequency (IF) signal, amplifying and filtering the IF signal, and up converting the IF signal to produce an unlicensed frequency signal; and

a broadcast antenna for wirelessly retransmitting the unlicensed frequency signal inside the structure; and

a secondary repeater configured for receiving the unlicensed frequency signal, down converting the unlicensed frequency signal to a second IF signal, amplifying and filtering the second IF signal, and up converting the second IF signal to produce a second satellite signal; and

a broadcast antenna for wirelessly retransmitting the second satellite signal inside the structure.

43-46. (CANCELLED)

47. (ORIGINAL) The repeater of claim 42, wherein the satellite signal is a digital radio signal.